



# UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE  
United States Patent and Trademark Office  
Address: COMMISSIONER FOR PATENTS  
P.O. Box 1450  
Alexandria, Virginia 22313-1450  
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/618,724	07/15/2003	Ikuya Kurosaki	TAKIT-182	7419

23599 7590 10/14/2005

MILLEN, WHITE, ZELANO & BRANIGAN, P.C.  
2200 CLARENDON BLVD.  
SUITE 1400  
ARLINGTON, VA 22201

EXAMINER

YEE, DEBORAH

ART UNIT PAPER NUMBER

1742

DATE MAILED: 10/14/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

**Office Action Summary**

Application No.

10/618,724

Applicant(s)

KUROSAKI ET AL.

Examiner

Deborah Yee

Art Unit

1742

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 29 July 2005.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 1-21 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-21 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- |   |   |
|---|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892)                        | 4) <input type="checkbox"/> Interview Summary (PTO-413)                     |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)    | Paper No(s)/Mail Date. _____  |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| Paper No(s)/Mail Date _____   | 6) <input type="checkbox"/> Other: _____                                    |

12

## **DETAILED ACTION**

### ***Claim Rejections - 35 USC § 103***

1. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

2. Claims 1 to 21 are rejected under 35 U.S.C. 103(a) as being unpatentable over Japanese patent 2001-335894 alone or in view of Japanese patent 406057383 for the reasons set forth in the previous office action dated April 27, 2005.

### ***Response to Arguments***

3. Applicant's arguments filed July 29, 2005 have been fully considered but they are not persuasive. It is the examiner's position that the English abstract of JP'894 discloses an Fe-Ni alloy material for a shadow mask having a composition with constituents whose wt% ranges overlap or closely approximate those recited by the claims; such similarities in wt% ranges establishes a prima facie case of obviousness because it would be obvious to one of ordinary skill in the art to select the claimed alloy wt% ranges over the broader disclosure of the prior art since the prior art teaches the same utility, see MPEP 2144.05.
4. Although JP'894 alloy contains no more than 0.05% Cu whereas the present invention recites a newly amended Cu range is 0.1 to 0.45%Cu, such would not be a patentable difference. Note that since applicant has not demonstrated criticality of 0.1

to 0.45%Cu (e.g. by comparative test data), then it would seem that a composition with 0.1 % Cu vs. a composition with slightly less (say 0.05%Cu) would depict a mere difference in the proportion of element without any attendant unexpected results which would not patentably distinguish claims over prior art. Note that original claim and specification discloses 0.05%Cu as permissible.

5. Moreover, it should be noted that applicant's Mn and Cu-S precipitate limitation recited by the claims would not carry any patentable weight since it appears to be a future and intended property when alloy is heat treated and in the form of foil strip. Note preamble of applicant's claim recites "An Fe-Ni alloy" per se and only recites CuS and MnS precipitate as a future property only when alloy is in the form of a foil strip having a thickness of 0.05 to 0.3 mm .

6. Also the English abstract of JP'894 teaches the concept of the present invention wherein an Fe-Ni alloy contains Cu and Mn to improve etching properties by creating MnS inclusions present at more than 1,500 pieces/ mm<sup>2</sup> having a diameter of 0.05 to 1 microns to act as etching starting points to promote excellent uniformity of hole diameter during etching process. Similarly, applicants teach MnS + CuS precipitates present at least 2,000 count/ mm<sup>2</sup> having a diameter of 0.01 to 3 microns. Even though prior art does not teach Cu sulfides as recited by the claims, such would be expected since compositional limitations are closely met, and recrystallization annealing is met, and in absence of proof to the contrary.

7. It should also be noted that according to an oral English translation by US Patent Office translator, Ms. Akiko Smith, JP'953 in paragraph 31 teaches adding Cu to make the configuration of MnS small and to prevent the generation of big and rough MnS but Cu is limited to 500ppm to prevent hot workability from being compromised.


8. Moreover, even though JP'894 does not teach Nb as recited by one or more of the dependent claims, such would not be a patentable difference. Note that Nb is a common additive for Fe-Ni alloys for shadow mask to further enhance strength as taught by JP'383. Since strength would be a property sought and desired by JP'894, then it would be an obvious modification for one skilled in the art to incorporate to produce no more than the known and expected effect from such an addition.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Deborah Yee whose telephone number is 571-272-1253. The examiner can normally be reached on Monday-Friday from 6:00 to 3:30.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Roy King can be reached on 571-272-1244. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Art Unit: 1742

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

  
Deborah Yee  
Primary Examiner  
Art Unit 1742

dy